

What is claimed is:

- 1        1.    A method comprising:  
2        positioning a semiconductor test wafer on a rotatable  
3        head;  
4        applying the semiconductor test wafer to a rotatable  
5        polishing pad; and  
6        polishing the surface of the semiconductor test wafer  
7        to remove less than about 500 Angstroms therefrom.
  
- 1        2.    The method of claim 1 further comprising applying  
2        an abrasive slurry to the rotatable polishing pad.
  
- 1        3.    The method of claim 1 further comprising applying  
2        a pressure to the semiconductor test wafer against the  
3        polishing pad of less than about 1.0 pound per square inch.
  
- 1        4.    The method of claim 1 further comprising removing  
2        less than about 200 Angstroms from the semiconductor test  
3        wafer.
  
- 1        5.    The method of claim 1 further comprising  
2        conditioning the rotatable polishing pad with a bristled  
3        brush after polishing the semiconductor test wafer.

1           6.    A method comprising:  
2           detecting particle defects added to the surface of a  
3    virgin test wafer by a semiconductor manufacturing tool;  
4           polishing the virgin test wafer with a polishing pad  
5    to remove less than about 500 Angstroms from the surface  
6    thereof; and  
7           re-using the virgin test wafer to detect particle  
8    defects in a semiconductor manufacturing tool.

1           7.    The method of claim 6 further comprising  
2    conditioning the polishing pad with a plastic bristled  
3    brush after polishing the virgin test wafer.

1           8.    The method of claim 6 further comprising rotating  
2    the polishing pad at a speed between about 10 revolutions  
3    per minute and about 100 revolutions per minute.

1           9.    The method of claim 6 further comprising applying  
2    a down force pressure to the virgin test wafer of between  
3    about 0.05 pounds per square inch and about 4.5 pounds per  
4    square inch.

1           10.   The method of claim 6 further comprising applying  
2    an abrasive slurry to the polishing pad, the abrasive  
3    slurry having an average particle size between about 25  
4    nanometers and about 50 nanometers.

1        11. A system comprising:  
2        a polishing platen having a polishing pad mounted  
3 thereon, the polishing platen rotatable at between about 10  
4 revolutions per minute and about 100 revolutions per  
5 minute; and  
6        a polishing head to hold a semiconductor wafer and  
7 urge the wafer against the polishing pad at a down force  
8 pressure of between about 0.05 pounds per square inch and  
9 about 4.5 pounds per square inch.

1        12. The system of claim 11 further comprising a  
2 dispenser to hold an abrasive slurry and dispense the  
3 slurry onto the polishing pad.

1        13. The system of claim 11 further comprising a  
2 rotatable pad conditioner having a plurality of soft  
3 bristles mounted on pellets.

1        14. The system of claim 11 wherein the polishing head  
2 is rotatable.

1        15. The system of claim 11 wherein the total material  
2 removed is less than about 500 Angstroms.